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09/839,499	04/20/2001	Paul F. Struhsaker	WEST14-00024	3403

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EXAMINER
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EWART, JAMES D

ART UNIT	PAPER NUMBER
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2683

DATE MAILED: 10/10/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/839,499

Applicant(s)

STRUHSAKER, PAUL F.

Examiner

James D Ewart

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4 and 7. 6) ☐ Other: \_\_\_\_\_

*Specification*

1. The disclosure is objected to because of the following informalities: Page 19 refers to reference numbers but does not indicate what figure is being discussed. There should be some opening such as: "Referring to figure 1, A fixed wireless...". Appropriate correction is required.

*Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless – (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-8 and 10-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Arazi et al. (U.S. Patent Publication No. 2002/0164991).

Referring to claim 1, Arazi et al teaches in a fixed wireless access (FWA) communication system having at least a first fixed-site base station (0082) and at least a first fixed-site subscriber station (Figure 1; 107,108,109) capable of communicating with the first fixed-site base station, an improvement of apparatus for facilitating radio communication with a mobile station (0011, 0012, 0021), said apparatus comprising: a first local-network radio transceiver positioned at the at least the first fixed-site subscriber station (Figure 1) said first local network radio transceiver for selectably transceiving communication signals with the mobile station upon a first local radio

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link formed between the first local-network radio transceiver and the mobile station (0014 and Figure 1) when the mobile station is positioned within a selected range of the first fixed-site subscriber station (0065). The WPBX base station is equated with the fixed site subscriber station and the switch with the fixed site base station.

Referring to claim 2, Arazi et al further teaches wherein the fixed-site subscriber station includes a large-area-network transceiver positioned thereat for transceiving communication signals upon a large-area radio link (0075 and Figure 3A) with the fixed-site base station and wherein said first local-network radio transceiver is coupled to the largearea-network transceiver such that communication signals generated at the fixed-site base station, communicated upon the large-area radio link and received at the large-area-network transceiver, are routed to said first local-area-network transceiver to be communicated to the mobile station upon the local radio link (Figure 2 and Figure 3A).

Referring to claim 3, Arazi et al further teaches wherein communication signals generated at the mobile station and communicated upon the local radio link to said first local-network transceiver are routed to the large-area-network transceiver to be communicated upon the large-area radio link to the fixed-sited base station (Figure 3A and 3B).

Referring to claim 5, Arazi et al further teaches wherein the at least the first fixed-site subscriber station comprises the first fixed-site subscriber station and at least a second fixed-site subscriber station (Figure 1), and wherein said apparatus further comprises: a second

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local-network transceiver positioned at the second fixed-site subscriber station (Figure 15A and 15B), said second local-network radio transceiver for selectably transceiving communication signals with the mobile station upon a second local radio link formed between the second local-network radio transceiver and the mobile station when the mobile station is positioned within a selected range of the second fixed-site subscriber station (0002).

Referring to claim 6, Arazi et al further teaches wherein said first local-network transceiver defines a first cellular area within which the mobile station is capable of transceiving the communication signals with said first local-network transceiver and wherein said second local network transceiver defines a second cellular area within which the mobile station is capable of transceiving the communication signals with said second local-network transceiver (0002 and Figure 14A and 15A).

Referring to claim 7, Arazi et al further teaches wherein the first cellular area defined by said first local-network transceiver and the second cellular area defined by said second local-network transceiver at least partially overlap (Figure 14A) and wherein selection is made of with which one of said first and second local-network transceivers, respectively, that the mobile station communicates responsive to determination of at least one communication parameter (0021, 0241, 0245 & 0279).

Referring to claim 8, Arazi et al further teaches wherein the at least one communication parameter responsive to which selection is made of with which one of said first and second

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local-network transceiver that the mobile station communicates comprises a signal quality parameter (0021, 0241, 0245 & 0279).

Referring to claim 10, Arazi et al further teaches wherein the mobile station is permitted movement at least between the first cellular area and the second cellular area and wherein communication hand-offs are performed between said first local-network transceiver and said second local-network transceiver responsive to movement of the mobile station between the first cellular area and the second cellular area defined by said first local-network transceiver and said second local-network transceiver, respectively (0002 and Figure 1).

Referring to claim 11, Arazi et al further teaches an improvement of a routing map coupled to the at least the first fixed-site base station, said routing map containing an indication of in which of the first cellular area and the second cellular area that the mobile station is positioned (0022, 0112-0122).

Referring to claim 12, Arazi et al further teaches wherein the at least the first fixed-site base station is connected to an access processor and wherein said routing map is located at the access processor (0021, 0022, 0110 and 0112-0122). The portion of the switch devoted to managing the calls table is equated with the access processor.

Referring to claim 13, Arazi et al further teaches wherein the indication of in which cellular area that the mobile station is located is updated responsive to changes in location of the mobile station (0002, 0022, 0110 and 0112-0122).

Referring to claim 14, Arazi et al further teaches wherein routing of communication signals to the mobile station is selected responsive to values of the indication contained thereat (0122).

Referring to claim 15, Arazi et al further teaches wherein, subsequent to updating of the values of the indication contained thereat, and responsive to hand-off of communications between said first localnetwork radio transceiver and said second local-network radio transceiver, undelivered communication signals are rerouted according to updated values of the indication (0122).

Referring to claim 16, Arazi et al teaches in a method for communicating in a fixed wireless access (FWA) communication system having at least a first fixed-site base station (0082) and at least a first fixed-site subscriber station (Figure 1; 107, 108, 109) capable of communicating with the first fixed-site base station (0082 and Figure 2), an improvement of a method for facilitating radio communications with a mobile station (0011, 0012, 0026), said method comprising: positioning a first local-network radio transceiver at the at least the first fixed-site subscriber station (Figure 1); and selectably transceiving communication signals with the mobile station when a first local radio link formed between the first local-network radio

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transceiver and the mobile station (0014 and Figure 1) when the mobile station is positioned within a selected range of the first fixed-site subscriber station (0065). The WPBX base station is equated with the fixed site subscriber station and the switch with the fixed site base station.

Referring to claim 17, Arazi et al further teaches wherein the first fixed-site subscriber station includes a large-area-network transceiver positioned thereat for transceiving communication signals upon a large-area radio link with the fixed-site base station (0075 and Figure 3A) and wherein said operation of positioning comprises coupling the first local network radio transceiver to the large-area-network transceiver such that communication signals generated at the fixed-site base station, communicated upon the large-area radio link and received at the large-area-network transceiver, are routed to the first local-area-network transceiver to be communicated to the mobile station upon the local radio link (Figure 2 and 3A).

Referring to claim 18, Arazi et al further teaches wherein the at least the fixed site subscriber station comprises the first fixed-site subscriber station and at least a second fixed-site subscriber station (Figure 1), said method further comprising the operation of positioning a second local-network radio transceiver at the second fixed-site subscriber station (Figure 15A and 15B).

Referring to claim 19, Arazi et al further teaches wherein the mobile station moves between coverage areas defined by the first local-network radio transceiver and by the second local-network radio transceiver, said method further comprising the operation of handing-off



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communications with the mobile station between the first local network radio transceiver and the second local-network radio transceiver when the mobile station moves between the coverage areas (0002).

Referring to claim 20, Arazi et al further teaches comprising the additional operation of maintaining a routing map indicting a routing map indicating in which coverage area the mobile station is positioned (0022 and 0112-0122).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 4 is rejected under 35 USC 103(a) as being unpatentable over Arazi et al in view of Moldavsky et al. (U.S. Patent No. 5,115,463) and further in view of Raves (U.S. Patent No. 6,379,119).

Referring to claim 4, Arazi et al further teaches wherein the large-area-network transceiver comprises connecting to a first local network transceiver, but does not teach that the transceivers are located within a rack assembly wherein transceivers are card-mounted. Moldavsky et al. teaches that the transceivers are located within a rack assembly wherein

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transceivers are card-mounted (Column 12, Lines 38-53). Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the art of Arazi et al with the teaching of Moldavsky et al. wherein the transceivers are located within a rack assembly wherein transceivers are card-mounted to limit the production of intermodulation products to FCC acceptable limits (Column 11, Lines 42-43). Arazi et al and Moldavsky et al. teach the limitations of claim 4, but do not teach connecting cards to an expansion slot. Raves teaches connecting cards to an expansion slot (Column 3, Lines 4-17). Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the art of Arazi et al and Moldavsky et al. with the teaching of Raves of connecting cards to an expansion slot to optimize rack configuration without compromising safety (Column 1, Lines 60-61)

4. Claim 9 is rejected under 35 USC 103(a) as being unpatentable over Arazi et al in view of Hamalainen et al (U.S. Patent No. 6,363,252).

Referring to claim 9, Arazi et al teaches at least one communication parameter responsive to which selection is made of with which one of said first and second local-network transceivers that the mobile station communicates, but does not teach wherein the parameter is load related. Hamalainen et al teaches wherein the parameter is load related (Column 3, Line 62 to Column 4, Lines 2). Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the art of Arazi with the teaching of Hamalainen et al wherein the parameter is load related to provide an improved impression as to how the new base

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station is capable of responding to the service needs of the mobile station (Column 1, Lines 42-44 and 62-65)

### *Conclusion*

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Bannister et al. U.S. Patent No. 6,097,968 discloses method and apparatus for routing calls to a low power portable.

Clark et al. U.S. Patent No. 6,023,459 discloses frequency assignment in wireless networks.

Dinkins U.S. Patent No. 5,790,936 discloses low power subscriber unit transmitting voice messages in a two-way communication system.

Izadpanah et al. U.S. Patent No. 6,560,213 discloses wideband wireless access local loop based on millimeter wave technology.

Rahman U.S. Patent Publication No. 2001/0041569 discloses macrodiversity control system having macrodiversity mode based on operating category of wireless unit.

Raves U.S. Patent No. 6,378,119 discloses method and system for adaptive component placement.

Tracy et al U.S. Patent No. 6,150,955 discloses apparatus and method for transmitting data via a digital control channel of a digital wireless network.

Williams et al. U.S. Patent No. 5,915,215 discloses private cellular telephone system.

Yla-Mella et al. U.S. Patent No. 6,526,290 discloses automatic conditional cross-connect.


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6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James D Ewart whose telephone number is (703) 305-4826. The examiner can normally be reached on M-F 7am - 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on (703)308-5318. The fax phone numbers for the organization where this application or proceeding is assigned are (703)305-9508 for regular communications and (703)305-9508 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

  
Ewart  
October 7, 2003

  
WILLIAM TROST  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600